NEW JERSEY BOARD OF PUBLIC UTILITIES
CONSTRUCTION, OPERATION AND MAINTENANCE OF TRANSMISSION AND DISTRIBUTION NATURAL GAS PIPELINES
N.J.A.C. 14:7-1

14:7-1.1 Scope

Unless otherwise ordered or permitted by the Board, the rules in this subchapter shall be observed and followed in connection with the construction, operation and maintenance of transmission and distribution pipelines for the transportation of natural gas by intrastate natural gas pipeline facilities within the State of New Jersey.

14:7-1.1A Definitions

For the purposes of this chapter, the following words and terms shall have the following meanings unless the context clearly indicates otherwise:

"Automatically controlled valve" means a valve that does not require personnel to activate. It closes in response to a pressure loss or flow rate increase that exceeds a pre-set level. The valve operator is powered by electricity, by the gas pressure in the pipeline, or by another power source. Automatically controlled valves are intended to provide timely closure whenever there is an abnormal pressure loss on the pipeline.

"Board" means the New Jersey Board of Public Utilities.

"Bureau" means the Bureau of Pipeline Safety in the Division of Reliability and Security.

"Class 3" means the Federal Class 3 location as described in 49 C.F.R. 192.5.

"Class 4" means the Federal Class 4 location as described in 49 C.F.R. 192.5.

"Division" means the Division of Reliability and Security in the Board of Public Utilities.

"Federal Code" means Federal pipeline safety rules at 49 C.F.R. 192.

"Pipeline operator" or "operator" means a person that owns, operates, manages or controls an intrastate natural gas pipeline, including a public utility as that term is defined in N.J.S.A. 48:2-13 or a natural gas pipeline utility as that term is defined in N.J.S.A. 48:10-3.

"Remotely controlled valve" means a valve that is operated by personnel from a location that is remote from where the valve is installed. The location is usually at the pipeline control or dispatching center. A remotely controlled valve consists of the valve itself and a valve operator that is attached to the valve to open or close it. The valve operator is powered by electricity, by the gas pressure from the pipeline, or by another power source. The communications linkage between the remote location and the remotely controlled valve may be by fiber optics, microwave, telephone lines, or satellite.

"Transmission pipeline" refers to any segment of a pipeline system that meets the criteria of a "transmission line" as defined in 49 C.F.R. 192.3.

14:7-1.2 Compliance with Federal Code

A gas pipeline shall be constructed, operated and maintained in compliance with the Code of Federal Regulations, Title 49, Part 192, hereinafter referred to as the "Federal Code," incorporated herein by reference, or such other standard as the Board may from time to time prescribe.

14:7-1.3 Classification of system

(a) Natural gas pipelines shall be classified in accordance with the provisions of the Federal Code. However, a portion of a gas pipeline shall be classified as location Class 3 or Class 4 if such portion of the pipeline is to be operated at a pressure in excess of 125 pounds per square inch gauge (psig) and constructed within 300 feet of, or if said pipeline is to be operated at a pressure in excess of 500 psig within 500 feet of, the following:

1. A place of residence;
2. A building used for public gathering;
3. Any school building, playground, or building devoted to institutional use;
4. Property that is zoned as residential; or
5. A building devoted to a business in which more than three people are employed and which is in existence or under construction at the date of execution of the right-of-way agreement or at the date of filing with the clerk of the Superior Court of a complaint in a condemnation action. This additional classification shall not apply to buildings which are under control of the gas pipeline operator.

14:7-1.4 Proscribed areas

(a) Gas pipelines which are to be operated at a maximum pressure in excess of 250 psig shall not be operated or installed within 100 feet of any building intended for human occupancy which is in existence prior to or under construction at the date of execution of the right-of-way agreement or at the date of filing with the Clerk of the Superior Court of a complaint in a condemnation action, unless such operation or installation is authorized and approved by the Board. A petition pursuant to this section for operation or installation of a transmission pipeline that is subject to the design requirements of 49 C.F.R. 192.150 shall include an evaluation of the need for an in-line inspection (ILI) and a proposed inspection schedule. The evaluation shall consider population density, length of the installation, operating pressure as a percentage of specified minimum yield strength, and other safety-related factors. In authorizing the operation or installation of a transmission pipeline pursuant to this section, the Board may require that an in-line inspection be performed, or a schedule of in-line inspection be submitted.

(b) Gas pipelines which are designed to be operated at a maximum pressure in excess of 250 psig shall not be installed without prior Board approval and shall be operated within limits set by the Board, if the pipeline will be located within 100 feet of any building intended for human occupancy which is in existence prior to, or under construction at, the date of execution of the right-of-way agreement or the date of filing with the Clerk of the Superior Court of a complaint in a condemnation action.

14:7-1.5 Welding

Welds, other than factory welds, on steel pipe of the physical and chemical properties for which the effective American Petroleum Institute Standard 1104 and Federal Code, hereinafter referred to in this subchapter as Welding Standards, are applicable shall be made in accordance with such Welding Standards, incorporated herein by reference.

14:7-1.6 Quality control of field welding

(a) All pipeline and piping welders shall be qualified in accordance with the requirements for the qualification of welders as set forth in the Welding Standards.

(b) Throughout the construction period, any representative samples of welds made by a welder or welding crew shall be removed from the line and tested to destruction in accordance with the provisions of the Welding Standards or shall be radiographically examined in accordance with the Welding Standards or examined by any other acceptable methods, the conditions for which are set forth in the Federal Code.

14:7-1.7 Fabrication details

(a) The requirements set forth in (b) through (d) below in addition to the requirements of the Federal Code shall be applicable to the construction of gas pipelines.

(b) Straight pipe may be bent cold in the field by any of the accepted methods of smooth bending provided that the wall thickness and strength of the pipe after bending is not less than that required under the applicable provisions of the Federal Code for straight pipe of the same diameter and grade.

(c) Branch connections for transmission pipelines fabricated by welding shall be of the reinforced type made in accordance with the rules for reinforced connections as provided in the Federal Code. However, line taps may be made under pressure in the sizes and at the pressure at which the line tapping equipment is recommended for use by the manufacturer, provided that all proper safeguards against injury to persons and property are taken.

(d) Mitre welds shall be made in accordance with the Federal Code.

14:7-1.8 Crossings

At points where a natural gas pipeline intersects a railroad or a New Jersey State Highway, such pipeline shall be installed in accordance with the specifications and standards established by the authority or agency having jurisdiction over the right-of-way.

14:7-1.9 Lines under or adjacent to railroads and highways

(a) Every gas pipeline constructed and operated within the boundaries of a railroad right-of-way or a public hard surface highway or street or within 25 feet thereof, shall conform to the standards and requirements of the Federal Code for gas pipelines in Location Class 3 or 4.

(b) In the construction of any gas pipeline parallel to railroad tracks, consideration shall be given to the character of the railroad traffic and the pressure and diameter of the gas pipeline in establishing the following:

1. The minimum amount of cover required over such pipeline;
2. The minimum proximity of the gas pipeline to the railroad track;
3. The need for additional valves to permit the prompt shutting off of gas in the event of pipeline failure or any other emergency; and
4. The need, if any, for casing.

(c) Whenever reasonably possible to avoid doing so, a gas pipeline subjected to or intended to be subjected to pressure in excess of 125 psig, should not be installed beneath and parallel to or within 25 feet of any public hard surface road or street. When such a gas pipeline is so installed the construction shall conform, as far as casing is concerned, to the provisions of N.J.A.C. 14:7-1.8 to the extent reasonably practicable.

(d) Notwithstanding the provisions of N.J.A.C. 14:7-1.8, all applicable rules of other State or local agencies having jurisdiction which exceed the requirements of said rule shall be effective.

14:7-1.10 Valve requirements

(a) Sectionalizing valves for distribution pipelines shall be installed and maintained at strategic points on the pipeline system at intervals which will permit sections of the line to be isolated. Sectionalizing valves for transmission pipelines shall conform at a minimum to the transmission pipeline valve spacing requirements in 49 C.F.R. 192.179, except that for new installations in locations that are classified as Class 1 or Class 2 in the Federal regulations the valve spacing shall conform to the Class 3 requirements.

(b) Within the boundaries of cities and villages or in the vicinity thereof, sufficient

additional valves shall be provided and other appropriate steps taken to provide means for promptly turning off the gas and rapidly reducing the pressure in any section of pipe in the event of a pipeline failure or other emergency.

(c) Each pipeline operator shall designate a representative or representatives in New Jersey who are familiar with the location and operation of the valves required by this section. The names, addresses, and telephone numbers of these representatives shall be furnished to the Secretary of the Board. Such representatives shall be available at all times for emergency services. The clerks of the municipalities through which the line is laid shall be furnished with a 24-hour emergency telephone number in addition to any obligations that the pipeline operator may have to the municipalities pursuant to the Federal Code.

14:7-1.11 Valve assessment and emergency closure

(a) The sectionalizing valve assessment and emergency closure plan for each of the operator's transmission pipelines, which was originally submitted to the Board prior to June 18, 1997, shall be designed to achieve rapid closure of valves in the event of an emergency. Each plan shall include a map showing the spacing of valves in accordance with N.J.A.C. 14:7-1.10 and a detailed evaluation of each Class 3 or Class 4 valve location that does not have a remotely controlled or automatically controlled valve.

1. Each Class 3 or Class 4 valve location shall be evaluated and prioritized as either high priority or low priority as to the need for installation or retrofit of a remotely controlled or automatically controlled valve. This evaluation and prioritization shall include consideration of the following factors:
    i. The population density of the valve location;
    ii. The amount of time that would be required to close the existing valve, based on the size and type of the valve and the valve operator;
    iii. The accessibility of the valve location in times of emergency, including a consideration of likely traffic conditions during the emergency;
    iv. The proximity of environmentally sensitive areas;
    v. The potential for third party damage;
    vi. The right-of-way conditions;
    vii. The corrosion history of the transmission line;
    viii. The design of the transmission line;
    ix. The operation conditions of the transmission line;
    x. The cost of the installation or retrofit; and
    xi. Any other factors that the pipeline operator considers appropriate, subject to the approval of these factors by the Board staff.
2. The plan shall set forth a timetable for the installation or retrofit, at each high priority location, of remotely controlled or automatically controlled valves within two years of the date the plan is approved.

(b) Upon receipt of an operator's valve assessment and emergency closure plan, the Bureau of Pipeline Safety shall review and approve the plan, with such

modifications as Bureau staff deems necessary, including changes in the prioritization of the valve locations, to ensure the rapid closure in an emergency of any sectionalizing valve on the transmission pipeline.

(c) The valve assessment and emergency closure plan shall be updated annually to account for changes in population density, new transmission lines, new valve technology, and other material changes, and shall be submitted to the Board for review by the Bureau of Pipeline Safety at least once each calendar year, and within an interval not to exceed 15 months.

(d) A valve assessment and emergency closure plan shall include training for the appropriate operating personnel to ensure that they are knowledgeable of emergency plans and procedures. An emergency closure drill that simulates shutting down a selected section of transmission line shall be performed at least once in a calendar year, but within an interval not to exceed 15 months. A final audit report of each emergency closure drill shall be submitted to the Board for review.

(e) If an operator believes that information contained in the valve assessment and emergency closure plan merits confidential treatment pursuant to the Open Public Records Act, N.J.S.A. 47:1A-1, et seq. (OPRA), any such purportedly confidential information submitted to the Board shall be specifically identified and marked by the operator and submitted to the Board in compliance with the Board's rules at N.J.A.C. 14:1-12 et seq.

14:7-1.12 Blow-offs

Automatic blow-off or pressure relieving devices shall be installed in such a manner that the released gas will not present a hazard to nearby persons or property. Manually operated blow-off valves shall be operated in such a manner as to avoid hazard to nearby property or persons.

14:7-1.13 Installation of pipe

(a) A pipeline operator shall provide for the inspection, either by the operator or by a contractor, of all pipes during installation and prior to backfilling to assure that the pipe installed will be free of nicks, gouges or other forms of damage which would tend to produce a concentration of stresses or otherwise reduce the strength of the pipe below the minimum required under the applicable provisions of the Federal Code for the service conditions at which it is intended to operate the pipeline.

(b) If a pipeline operator wishes to install more than one utility line in a single trench, the operator shall first prepare and submit a joint-trench installation procedure to the Bureau of Pipeline Safety for review under the procedure established in 1.37. No pipeline operator shall perform a joint trench installation except in accordance with a joint-trench procedure previously reviewed by the Bureau for consistency with 49 C.F.R. 192.325.

(c) A pipeline operator shall provide for the inspection of all joint-trench pipe installations, and shall insure that the installation complies with the joint-trench procedures previously reviewed under the procedure established in 1.37 by the Bureau of Pipeline Safety, as well as with the applicable provisions of the Federal Code.

14:7-1.14 Minimum cover of mains

(a) Gas pipelines within the scope of this subchapter shall be laid with a cover of not less than 24 inches above the top of the pipe except where interference with other subsurface structures makes it impracticable to maintain this depth of cover, in which event the pipe shall be cased or protected with a suitable shield of metal. Gas pipelines shall be laid so as to avoid other subsurface structures and such pipelines shall not be laid within the distance of less than 12 inches from any other subsurface structure whenever reasonably practicable to avoid doing so. A structure providing a space in which a substantial volume of an explosive mixture might accumulate in the event that gas escapes from the pipeline shall be avoided when reasonably practicable to do so and preference shall be given to crossing over rather than under such structures.

(b) Whenever conditions permit, gas pipelines within cities and villages shall be laid with a cover of not less than 36 inches above the top of the pipe.

14:7-1.15 Projections

Any portion of a pipeline which protrudes above the ground shall be conspicuously painted, marked or fenced or otherwise protected against damage or tampering.

14:7-1.16 Corrosion control

(a) An operator shall ensure that each buried or submerged metallic pipeline installed after July 31, 1971 has an external protective coating and a cathodic protection system designed to protect the pipeline in its entirety in accordance with the Federal Code, installed and placed in operation within one year after completion of construction. An operator need not comply with this provision if tests, investigations or experience demonstrate that:

1. In the case of a copper pipeline, a corrosive environment does not exist; or
2. In the case of a temporary pipeline (not to exceed five years of service), corrosion during the life of the pipeline will not be detrimental to public safety.

(b) Each buried or submerged metallic pipeline installed prior to August 1, 1971, shall conform to the requirements as set forth in the Federal Code.

(c) Whenever pipe coating is applied, the pipeline operator shall take the following additional precautions:

1. Tests and inspections shall be made before backfill to insure that the coating is adequate and satisfactory;
2. During backfill, precautions shall be taken to insure the coating is not damaged; and
3. On completion of backfill, tests shall be made to ascertain if the coating is adequate and satisfactory.

(d) After installation of a metallic pipeline, periodic inspection or tests of the line shall be conducted to determine whether or not the pipeline is adequately protected. Each operator shall maintain a suitable log, indicating the character and results of periodic inspection and tests.

(e) An operator shall perform leak detection surveys using leak detection equipment that is at least as reliable and sensitive as flame ionization on all bare and coated cathodically unprotected steel service lines at intervals consistent with the requirements in 49 C.F.R. 192.723. The survey results shall be summarized and maintained by the operator, along with the original surveys. An operator shall replace all bare and coated cathodically unprotected steel service lines within a definable area when records indicate that 20 percent or more of the bare and coated cathodically unprotected steel services within that definable area have exhibited leaks.

14:7-1.17 Testing

(a) Testing of all natural gas transmission and distribution pipelines shall be performed in accordance with the provisions of the Federal Code.

(b) The Board shall be notified at least two working days prior to pressure testing of any gas transmission pipeline. Officials of municipalities wherein a line is to be tested shall also be notified in order that proper and adequate police protection may be provided.

(c) When water is used for the testing of a gas transmission pipeline, suitable provisions shall be made for disposal of the water on completion of the test. Suitable precautions shall also be taken to avoid contamination of local streams or water supplies in the event of a line failure.

(d) Test pressure, in accordance with (b) and (c) above, shall be maintained wherever possible for a period of 24 hours but in no event for a period of less than 12 hours.

14:7-1.18 Purging

Air shall be purged from pipelines in accordance with the requirements of 49 C.F.R. 192.629.

14:7-1.19 Compressor stations: piping

Gas piping in gas compressor stations shall be installed in accordance with the provisions of the Federal Code applicable to compressor station piping.

14:7-1.20 Compressor stations: relief and pressure limiting devices

Pressure relief or pressure limiting devices of sufficient capacity and sensitivity shall be installed and maintained to assure that the maximum allowable operating pressure of the station piping is not exceeded beyond the amount allowed by 49 C.F.R. 192.169. Suitable provisions shall be made for safely disposing of the gas released from such devices. Periodic tests and inspections shall be made to assure continued sensitivity of these devices.

14:7-1.21 Compressor stations: remote safety shut-downs

Each compressor station with installed horsepower of more than 1,000 and operating at pressures in excess of 250 psig shall be provided with remote emergency shut-down devices which will allow the station to be shut down from a remote point, away from the compressor building.

14:7-1.22 Compressor stations: clearance

Compressor stations to be located on gas pipelines shall not be constructed in areas where such construction is prohibited under applicable zoning regulations and laws. At locations where a compressor station is constructed, the distance between a building that is not under the control of the pipeline operator and is intended for human occupancy and the main compressor room of the compressor station that is intended to operate at pressures in excess of 250 psig shall not be, at the time of construction of the station, less than the distance indicated in the following table:

Installed Horsepower	Distance from Structure in feet
Under 1,000	250
1,000 and over	500

14:7-1.23 Compressor stations: fire prevention

Supplies of gasoline, lubricants, paints and other similar combustible materials in excess of those required in actual operation shall be stored at a safe distance from the compressor building. Gas engine crankcases shall be vented outside the building with a vent not smaller than the connection provided by the compressor manufacturer. Warning signs adequate to indicate the danger involved shall be placed in conspicuous locations around the compressor station area.

14:7-1.24 Compressor stations: electric installations

All electric wiring, fixtures and devices within compressor buildings shall be

designed and installed with Article 500 of the edition of the National Electrical code currently recognized by the Federal Code and shall meet the requirements thereof for Class I locations, and shall also conform to applicable provisions of the edition of the National Electrical Safety Code currently recognized by the Federal Code, incorporated herein by reference.

14:7-1.25 Compressor stations: ventilation

Compressor stations shall be provided with adequate natural draft ventilating devices.

14:7-1.26 Meter and regulator stations: piping

All gas piping in meter and regulator stations shall comply with the requirements of the Federal Code for such piping.

14:7-1.27 Meter and regulator stations: electric installations

All electric wiring, fixtures and devices in meter and regulator station buildings shall be designed and installed in accordance with Article 500 of the edition of the National Electrical Code currently recognized by the Federal Code and shall meet the requirements thereof for Class I locations, and shall also conform to applicable provisions of the edition of the National Electrical Safety Code currently recognized by the Federal Code, incorporated herein by reference.

14:7-1.28 Meter and regulator stations: general requirements

Meter and regulator stations located on gas pipelines shall be designed, constructed, operated and maintained in accordance with the Federal Code.

14:7-1.29 Odorization

(a) All gas in gas pipelines shall meet the standard for odorization in the Federal Code. Any gas having an insufficient odor of its own to serve as a warning agent in the event of the escape of unburnt gas shall be odorized with a suitable odorant. The Board shall be notified of the type of odorant used and the rates at which it will be added to the gas and the location of any odorization stations located within the State. A suitable log shall be kept showing the quantity of odorant added and the volume of gas odorized. An operator shall make periodic tests, on at least a quarterly basis, at various points in each system to determine the adequacy of the odorization of the gas and a suitable record of such test should be maintained.

(b) Equipment for introduction of the odorant into the gas shall be so designed as to provide a uniform level of odor in the gas. The equipment and facilities for handling the odorant shall be located where the escape of odorant would not be a nuisance.

14:7-1.30 Accidents

Each gas pipeline operator shall comply with the procedures for reporting accidents, set forth at N.J.A.C. 14:2-4.4, 14:2-6.5 and 14:3-6.4.

14:7-1.31 Interruptions

Service interruptions affecting customers of gas pipeline operators in New Jersey shall be reported to the Board promptly by the speediest means of communications available. However, interruptions to service made in accordance with provisions set forth in contracts between gas pipeline operators and their customers need not be reported.

14:7-1.32 Proposed construction

At least 30 days prior to the construction or major reconstruction of any gas pipeline intended to be subjected to pressure in excess of 125 psig, a report shall be filed with the Board setting forth the specifications of such pipeline.

14:7-1.33 Compliance; supplementary data on tests

(a) Before a transmission pipeline is placed in operation, a statement shall be submitted to the Board certifying that the pipeline has been tested and meets the requirements of the Federal Code and other rules herein for the maximum service pressure at which it will be operated. This statement shall also include:

1. Pressures at which the lines were tested;
2. The computation of maximum allowable working pressures in conformity with the provisions of the Federal Code; and
3. The results of leakage or tightness tests made on the line.

(b) No gas pipeline shall be operated at pressures in excess of the pressure for which it was certified to the Board.

14:7-1.34 Monthly patrols

Each transmission pipeline operator shall have a patrol program with patrols at least once per month in Class 3 and Class 4 locations to observe surface conditions on and adjacent to the transmission pipeline right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation.

14:7-1.35 Public outreach

(a) Each transmission pipeline operator shall establish and maintain liaison with appropriate fire, police, and other public officials to:

1. Learn the responsibilities and resources of each government organization that may respond to a gas pipeline emergency;
2. Acquaint the officials with the operator's ability in responding to a gas pipeline emergency;

3. Identify the types of gas pipeline emergencies of which the operator notifies the officials; and
4. Plan how the operator and officials can engage in mutual assistance to minimize hazards to life or property.

(b) Each operator that is a public utility shall offer to meet on at least an annual basis with appropriate fire, police, and other public officials of each municipality through which its transmission pipeline traverses as part of the liaison required pursuant to (a) above. An operator shall maintain records of its attempts to meet with local officials and of attendance and the basic topics covered at these meetings and shall make such records available for inspection by Board staff.

(c) Each transmission pipeline operator shall provide annual notice of the existence of the pipeline to the residents of properties abutting the operator's pipeline, including the operator's telephone number which the resident may use to report any unusual odors or activities, including construction or dumping, around the pipeline. This notice may be mailed or distributed door-to-door to the abutting residents.

14:7-1.36 Damage prevention

(a) A transmission pipeline operator shall make all reasonable efforts to provide on-site inspection oversight immediately prior to and during any excavation or backfilling, of which the operator is notified by the One Call System operator pursuant to N.J.S.A. 48:2-73 et seq., that exposes or potentially exposes the operator's transmission pipeline. An operator shall maintain documentation of its efforts to provide oversight and shall make such documentation available to Board staff upon request.

(b) An operator shall place a yellow subsurface marking or warning tape in the backfill above a transmission or distribution pipeline whenever the pipeline is installed, repaired or replaced, except that this requirement shall not apply to a transmission or distribution pipeline that is being installed, repaired or replaced by directional drilling or boring.

14:7-1.37 Revisions to operating and maintenance standards

(a) A pipeline operator shall not revise any operating and maintenance standard that affects the frequency or performance of inspections, investigations, surveys, or testing, without submitting the revision to the Bureau of Pipeline Safety for review to determine if the revision will affect compliance with the safety requirements of 49 C.F.R. 192.

(b) The pipeline operator shall submit the proposed revision to the Bureau of Pipeline Safety at least 30 business days prior to implementing the revised operating and maintenance standard. The submittal shall demonstrate that the revisions will not decrease the level of safety provided by 49 C.F.R. 192.

(c) If the Bureau of Pipeline Safety finds that the proposed revision affects the ability of the pipeline operator to meet the safety requirements of 49 C.F.R. 192, the Bureau shall notify the operator within 30 business days after receiving the proposed revision to not institute the proposed revision, and shall provide the operator with one opportunity to resubmit an updated proposal. The Bureau will accept, modify, or deny the resubmitted proposal within 10 business days. If the Bureau does not notify the operator under this section within 30 business days after receiving the initial proposed revision, the operator may implement the revision. Notwithstanding this subsection, the Bureau shall require the operator to amend its operation and maintenance standards as necessary if those standards are later discovered to fail the safety requirements of 49 C.F.R. 192.